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NATIONAL CURRICULUM FRAMEWORK 2005  
POSITION PAPER  
NATIONAL FOCUS GROUP ON  
HEALTH AND PHYSICAL EDUCATION



S.C.E.R.T., W.B.  
N.C.F. '2005

Position Paper  
Code no. 9.14.

3.5

POSITION PAPER  
NATIONAL FOCUS GROUP  
ON  
**HEALTH AND  
PHYSICAL EDUCATION**



राष्ट्रीय शैक्षिक अनुसंधान और प्रशिक्षण परिषद्  
NATIONAL COUNCIL OF EDUCATIONAL RESEARCH AND TRAINING



**First Edition**

May 2006 Chaitra 1928

**PD 5T BS**

© **National Council of Educational  
Research and Training, 2006**

**Rs. 20.00**

*Printed on 70 GSM paper*

Published at the Publication Department  
by the Secretary, National Council of  
Educational Research and Training, Sri  
Aurobindo Marg, New Delhi 110 016 and  
printed at Bengal Offset Works, 335, Khajoor  
Road, Karol Bagh, New Delhi 110 005

**ISBN 81-7450-567-9**

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**OFFICES OF THE PUBLICATION DEPARTMENT, NCERT**

NCERT Campus  
Sri Aurobindo Marg  
New Delhi 110 016

108, 100 Feet Road  
Hosdakere Halli Extension  
Banashankari III Stage  
Bangalore 560 085

Navjivan Trust Building  
P.O. Navjivan  
Ahmedabad 380 014

CWC Campus  
Opp. Dhankal Bus Stop  
Panlhati  
Kolkata 700 114

CWC Complex  
Malligaon  
Guwahati 781 021

**Publication Team**

Head, Publication Department : *P. Rajakumar*  
Chief Production Officer : *Shiv Kumar*  
Chief Editor : *Shveta Uppal*  
Chief Business Manager : *Gautam Ganguly*  
Assistant Editor : *Bijnan Sutar*  
Production Officer : *Arun Chitkara*

**Cover and Layout**  
*Shweta Rao*



## EXECUTIVE SUMMARY

It is well acknowledged that health is a multidimensional concept and is shaped by biological, social, economic, cultural and political factors. Access to basic needs like food, safe water supply, housing, sanitation and health services influences the health status of a population and these are reflected through mortality and nutritional indicators. Health is a critical input for the overall development of the child and it influences significantly enrolment, retention and completion of school. This subject area adopts a holistic definition of health within which physical education and yoga contributes to the physical, social, emotional and mental aspects of a child's development.

An analysis of the mortality and nutritional indicators from the pre-school, primary, secondary and senior secondary levels show that under-nutrition and communicable diseases are the major health problems faced by majority of the children in this country. Therefore, the curriculum for this area has to address this aspect at all levels of schooling with special attention to vulnerable social groups and girl children. It is proposed that the mid day meal programme and medical check ups must be a part of this subject and health education must be related to the needs of the children and also address the age specific concerns at different stages of development. The idea of a comprehensive school health programme was conceived of in the 1940's that included six major components viz. medical care, hygienic school environment, and school lunch, health and physical education. These components are important for the overall development of the child and hence these need to be included as a part of the curriculum for this subject. The manner in which this subject has been transacted is fragmented and lacks a holistic or comprehensive approach. Health education, yoga and physical education are dealt with separately and the curriculum is being transacted conventionally with little innovative approaches to learning.

Given the interdisciplinary nature of this subject there are cross cutting themes across subjects. Therefore, there is a need for cross-curricular planning and also integrating it with socially useful productive work, National Service Scheme, Bharat Scouts and Guides and the like. This subject lends itself for applied learning and innovative approaches can be adopted for transacting the curriculum. Both yoga and physical education have to be a regular part of the school's timetable and must be seen as an important contribution for the overall development of the child. This would require flexibility in the school calendar and also in the structuring of school timetable in terms of the time and space allotted for integration of this subject area.

The importance of this subject to the overall development needs to be reinforced at the policy level, with administrators, other subject teachers in schools, the health department, parents and children. There are several ways in which this can be done and would include the recognition of the subject as core and compulsory in the curriculum, that the required infrastructure and



human resources are in place, that there is adequate teacher preparation and also in-service training, that there is interface between the school, health department and the community. Although the subject is compulsory till class X, it is not given its due importance. It has been suggested that it be treated as a core subject and students who wish to opt for it as one of core subjects in lieu of another subject may do so. This subject should be offered as an elective subject at the plus two level.

The curriculum and syllabus for this subject has to adopt a 'need based' approach to a child's development. This is the framework that will guide the inclusion of physical, psycho-social and mental aspects that need to be addressed at different levels of schooling. A basic understanding of the concerns need to be delineated but this subject has an applied dimension that needs strengthening through experiential learning, acquiring skills to recognize and cope with demands, expectations and responsibilities of daily living, the collective responsibilities for health and community living also need to be emphasised.

During the last two decades several National Health Programmes like the Reproductive and Child Health, HIV/AIDS Education/Adolescence Education; Tuberculosis and Mental Health have been emphasising on health education and children are viewed as a potential 'target group' for preventive and promotive activities. The concern with this approach is that the focus is on giving information and each of these programmes are independent of another. This creates demands on the teachers and children to deal with each of these concerns and they are not integrated into the existing curriculum. It is suggested that the curriculum on "Health and Physical Education" must identify major communicable and non-communicable diseases for which health information be provided at the appropriate developmental level of the child.

This subject offers enormous potential for the adoption of innovative strategies and the experiences of quasi government programmes like the Mahila Samakhya and several NGOs across the country who have worked with children on issues related to health and physical education needs to reviewed, assessed and integrated into curriculum planning, development of syllabi and pedagogy.

The evaluation of this subject needs plurality of strategies, which should be a part of continuous and comprehensive evaluation. The present mode of theory and practical examinations is inadequate for 'performance' of children in this subject and is a major reason for the ineffective transaction of this curricular area in schools. Before a continuous and comprehensive evaluation is put in place, the present evaluation system should follow the pattern of other core subjects.

This subject must be introduced from the primary level onwards and even at this level, through the medium of play, concepts from other subject areas can be reinforced. Formal introduction of asanas and dhyana should begin only from class sixth onwards. Even health and hygiene education must rely on the practical and experiential dimensions of children's lives. This subject must be compulsory until the tenth class, after which it can be an elective subject.



## MEMBERS OF NATIONAL FOCUS GROUP ON HEALTH AND PHYSICAL EDUCATION

**Dr. Rama Baru (Chairperson)**

Centre for Social Medicine and  
Community Health  
Jawaharlal Nehru University  
New Delhi – 110 067

**Shri G.C. Bhol**

Plot No. 459  
Sabarasahi, Nayapalli  
Bhubaneswar – 751 012  
Orissa

**Dr. Jitendra Nagpal**

Consultant Psychiatrist  
Vidyasagar Institute of Mental Health  
and Neuro Sciences (VIMHANS)  
1 Institutional Area, Nehru Nagar  
New Delhi – 110 065

**Capt. (IN) V.K. Verma**

Principal and Director  
Motilal Nehru School of Sports  
Rai, Distt. Sonipat - 131 029  
Haryana

**Prof. Saraswati Swain**

NIAHRD  
Kalyani Nagar  
Cuttack – 753 013  
Orissa

**Dr. S.S. Hasrani**

Principal  
Laxmi Bai National College of  
Physical Education  
P.B. 3, Kariyavattom PO  
Trivendrum – 695 581  
Kerala

**Dr. Damayanti Tambay**

Deputy Director (Sports)  
Jawaharlal Nehru University  
New Delhi – 110 067

**Mr. Sukhdeep Singh**

Vice Principal  
Guru Harkishan Public School  
Tilak Nagar  
New Delhi

**Dr. Chhaya Rai**

Director  
Academic Staff College  
Rani Durgawati University  
Jabalpur – 482 001  
Madhya Pradesh

**Dr. Ramesh Pal**

Reader in Physical Education  
Laxmibai National College of  
Physical Education  
Shakti Nagar  
Gwalior – 474 002  
Madhya Pradesh

**Shri O.P. Tiwari**

Secretary, SMYM Samiti  
Kaivalyadhama, Lonavla  
Pune – 410 403  
Maharashtra



**Dr. B.P. Bhardwaj**

Reader, Department of Teacher Education and  
Extension (DTEE)  
NCERT, Sri Aurobindo Marg  
New Delhi – 110 016

**Prof. J.L. Pandey (Member-Secretary)**

National Coordinator National Population  
Education Programme (NPEP)  
Department of Education in Social Sciences  
and Humanities (DESSH)  
NCERT, Sri Aurobindo Marg  
New Delhi – 110 016

**Invitees:****Dr. M. M. Gore**

Research Officer  
Kaivalyadhama, Lonawala  
Pune

**Mr. R. S. Bhogal**

Principal, G. S. College  
Kaivalyadhama, Lonawala  
Pune

**Dr. D. R. Vaze**

Senior Medical Consultant  
Kaivalyadhama, Lonawala  
Pune

**Dr. R. K. Bodhe**

Research Officer  
Kaivalyadhama, Lonawala  
Pune

**Dr. B. R. Sharma**

Asstt. Director of Research in Philosophico-Literary  
Research  
Kaivalyadhama, Lonawala  
Pune

**Dr. S. K. Ganguly**

Managing Editor, Yoga Mimansa  
Kaivalyadhama, Lonawala  
Pune

**Professor G. S. Sahay**

Research Officer  
Kaivalyadhama, Lonawala  
Pune

**Mr. D. D. Kulkarni**

Research Officer  
Kaivalyadhama, Lonawala  
Pune

**Mr. Kartik Kesarker**

Counsellor  
Kaivalyadhama, Lonawala  
Pune

**Mr. Subodh Tiwari**

Administrator  
Kaivalyadhama, Lonawala  
Pune

**Dr. T. K. Bera**

Assistant Director, Science Research  
Department of Education in Social Sciences and  
Humanities, NCERT  
Kaivalyadhama, Lonawala  
Pune

**Prof. Saroj Yadav**

NPEP, Department of Education in Social Sciences  
and Humanities, NCERT  
New Delhi – 110 016



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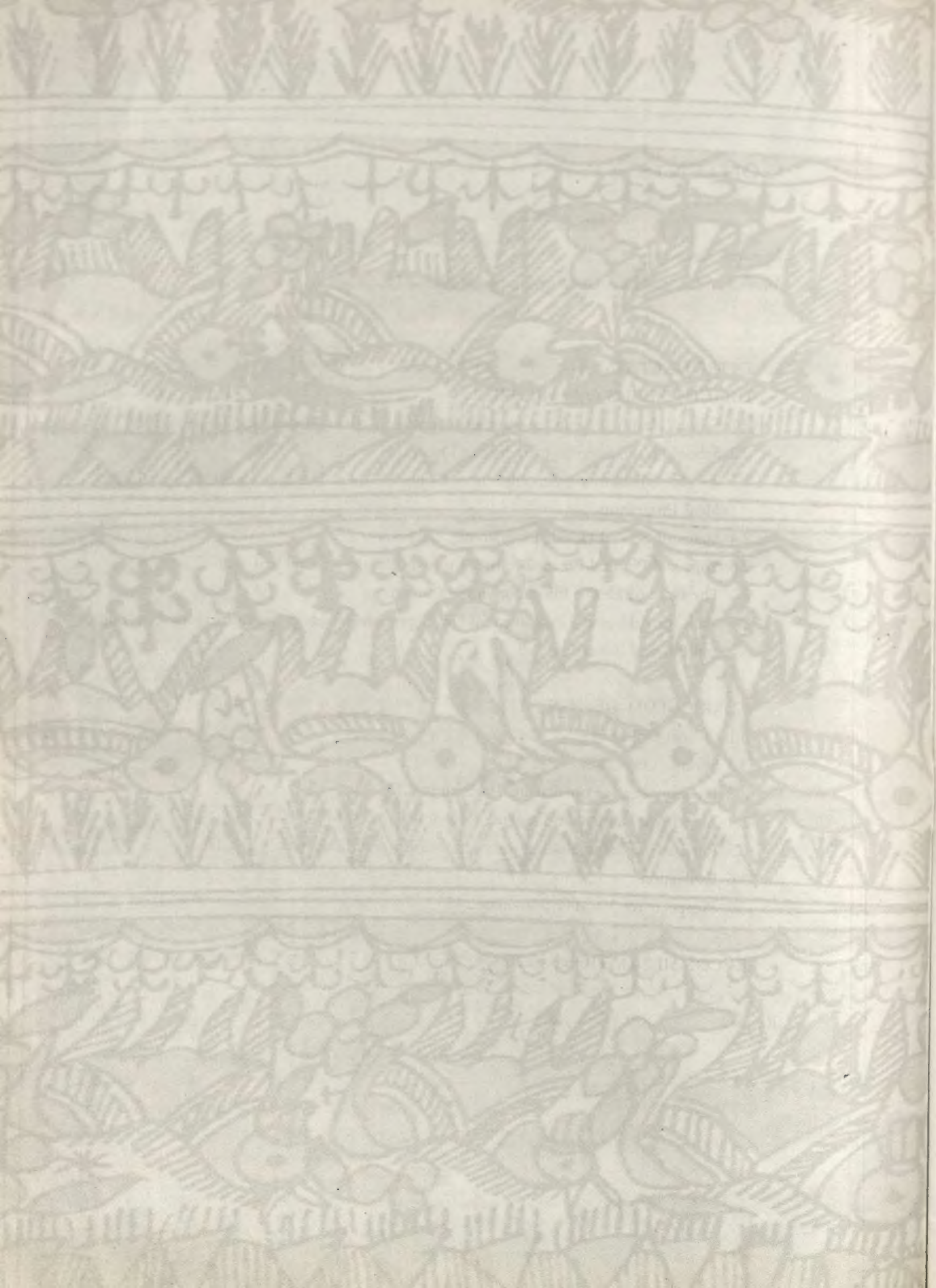
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## 1. INTRODUCTION

Health is a multidimensional concept because it is shaped by biological, social, economic and cultural factors. Health is not merely the absence of disease but is influenced and shaped by the access to basic needs like food security; safe water supply, housing, sanitation and health services. Within this broader definition of health, individual health is intrinsically interrelated with social factors. Therefore while individual health is important it is necessary to delineate its linkages with the physical, social and economic environment in which people live.

Children's health is an important concern for all societies since it contributes to their overall development. Health, nutrition and education are important for the overall development of the child and these three inputs need to be addressed in a comprehensive manner. While the relationship between health and education is seen more in terms of the role that the latter plays in creating health awareness and health status improvements, what is not adequately represented in the debates is the reciprocal relationship between health and education, especially when it comes to children. Studies have shown that poor health and nutritional status of children is a barrier to attendance and educational attainment and therefore plays a crucial role in enrollment, retention, and completion of school education (Rana, K & Das, S: 2004; World Bank: 2004).

The concerns related to health, nutrition and other inputs that contribute to the overall development of the child, therefore need to be part of the curriculum on 'Health and Physical Education' at the primary, secondary and senior secondary schools. Given the interdisciplinary nature of the subject, it should not be just another 'text book learning' exercise but requires integration and cross curriculum planning with other subjects and co-curricular areas. This kind of a

conceptualisation lends itself to a number of possibilities for applied learning related to the immediate lives and environments of children and their communities.

In order to define the scope of this subject one needs to identify areas that are related to the needs of the overall development of the child. *The access to basic needs in terms of food, clothing, shelter* is essential for the fulfillment of the psycho-social and higher needs. *Given this broad understanding, this subject needs to address the fulfillment of these basic needs at various levels of schooling.* Within this overall framework both yoga and physical education are seen as routes for achieving not merely physical fitness but for psychosocial development as well. There are broadly four areas that are related to health, yoga and physical education. These are:

1. Personal health, physical and psycho-social development
2. Movement concepts and motor skills
3. Relationships with significant others
4. Healthy communities and environments

In order to address these four areas there is need to identify topics that are covered in various school subjects, co-curricular subjects and also government programmes like the school health and mid day meal initiatives. We recognise that the curriculum design for this subject is challenging both in terms of content and evaluation.

*For the effective implementation of the curriculum certain basic requirements need to be in place in terms of infrastructure and human resources. There are a number of research studies that have pointed out the financial and structural inadequacies facing both education and health. These concerns are not merely restricted to this focus group but would be a shared concern across all the groups. Therefore there is a need for these concerns to be addressed by all the focus groups for the effective implementation of the revised curriculum.*



## 2. HEALTH NEEDS OF CHILDREN

While addressing the health needs of children it is important to examine the available data on causes of mortality and morbidity across the concerned age groups and also the variation it presents across caste/class; gender and regions. This is important for evolving a curriculum and syllabus that addresses the real life situations and experiences of school going children factoring in the variations across states, class/caste and gender. A review of available macro data and studies shows that the major cause of mortality and morbidity among children are a group of disease conditions like diarrhoea, pneumonia and fevers that are related to poor living conditions and lack of access to basic needs. The burden of infant mortality, maternal and child mortality are being borne disproportionately by the schedule caste and tribes as compared to other caste groups. (IIPS: 2000) An important cause for the above mentioned communicable diseases are the prevalence of under nutrition among children. The NFHS data show that 53 percent of children in rural areas are underweight in India and this varies across states. In some states this figure is as high as 60 percent who are underweight especially among the schedule tribes in the poorer states. The extent of stunted growth of children is also of concern and has consequences for schooling.

The age specific data on major causes of mortality shows that low birth weight, respiratory infections and anemia are the major causes of mortality for under -five age group. Respiratory infections and anemia become the major causes for the age group 5-14. Respiratory infections especially tuberculosis becomes the major cause of mortality for females after the age of 15. (Shiva & Gopalan, 2000; p.162)

Since under-nutrition and communicable diseases is a major problem among majority of school going children, the curriculum design has to address and integrate these concerns effectively. Even before

independence, several Committees on education and health realised the need for a programme that would deal with both malnutrition and infectious diseases. Several countries including India have recognised the importance of a School Health programme. In the following section we have done a brief review of international experiences and the evolution of the school health programme in India.

### 2.1 School Health Programme in other Countries: A Brief Review

In the United Kingdom school health services are provided through the Local Education Authorities with grants from the Ministry of Education. The National Health Service provides free medical care to all school children. In the former Soviet Union, it was a part of the comprehensive scheme for children from birth until the child completes elementary education. Almost all schools with more than eight hundred children had full time doctors and nurses. In France there is a comprehensive programme for providing school health services until the university level with the required compliment of staff. After the World War II, as a part of its post war reconstruction effort, Japan regarded school health services as an integral part of school education. The school health programme included regular medical check ups, school lunch programme and health education inputs. This programme was a co-operative effort between the school, Ministry of Education, Health Centres and other medical agencies. These countries represent examples where health input is an important constituent of the subject area of health and physical education.

### 2.2 School Health Services in India: An Overview

A framework for school health services was put forward in the Report on Post-War Educational Development in India, which was issued by the Central Advisory



Board in 1944. This report recommended that school health service should be under the administrative control of the education department. The Bhore Committee that provided the blueprint for health services development in independent India devoted a substantial section on the need and importance of school health programme for school going children. They recommended that the school health programme must be a part of the general health services and should not have dual administrative control viz. between the education and health departments, but should be under the control of the latter. They were of the opinion that a dual administration will result in the duplication of personnel and infrastructure (GOI: 1946; p.111).

The Bhore Committee, which was set up around the time of independence, clearly spelt out the duties of a school health service and even today it represents the most comprehensive view of this programme. According to the committee, the duties of a school health service are:

“(1) Health measures, preventive and curative, which include (a) the detection and treatment of defects and (b) the creation and maintenance of a hygienic environment in and around the school, and (2) measures for promoting positive health which should include: (a) the provision of supplementary food to improve the nutritional state of the child, (b) Physical culture through games, sports and gymnastic exercises and through corporate recreational activities and (c) health education through formal instruction and practice of the hygienic mode of life (GOI: 1946; p.112)

***This comprehensive definition is valid even in the present context and therefore the group recommends that it be adopted as a working definition for this subject area.***

Thus the major components that have to be included in the school health programme are medical care, hygienic school environment, and school lunch,

health, yoga and physical education. The School Health Programme has to be a coordinated effort between the education and health departments with the latter providing preventive, curative and promotive services at all levels of schooling.

This committee had recommended that the school health service must be introduced in phases whereby primary schools are covered first and then extended to secondary and high schools and colleges. Two teachers were to be identified in each school and trained to carry out health duties. At the same time the committee recognised the importance of orienting other teachers to identify signs of ill health and liaise with the school and doctors (GOI: 1946; p.112).

As far as health education was concerned the Bhore Committee opined that: “Formal classroom instruction in health matters should, in respect of the primary school children, be reduced to the minimum. What is essential is that hygienic habits be inculcated” (GOI: 1946; p.112).

***This recommendation is valid even today and therefore should be a guideline for evolving syllabus.***

In 1958, the school health division was established in the Ministry of Health Welfare in order to strengthen health education programmes for young people. This division served as a resource center for the NCERT, the Department of Education and the Directorate of Adult Education. There have been efforts to integrate health education into school curricula with the Central Bureau of Health Education playing an important role in collaboration with the NCERT.

This integrated perspective to school health provided a synergistic approach between health and education, rather than seen as separate programmes. This integrated vision was subsequently lost both conceptually and in practice. Instead of the school health programme being integrated with the curriculum of health and physical education it became a ‘vertical’ programme of the Health Ministry while teachers in



schools dealt with health education and physical education separately.

A review of the policy and curricular documents of the Ministry of Education shows that up to the late 1960s there was a comprehensive approach to the subject than during the later years where it gets fragmented into physical education and health education with little or no reference to the necessity of school lunch or medical check ups. An intensive pilot project was undertaken by the National Institute of Health and Family Welfare (NIHFW) and it came up with a number of suggestions. It stressed on the need for school health education to be intensified, sanitation in schools to be improved, nutritional programmes for the children and medical services to be provided.

The school health programme was probably performing poorly because it was administratively under the control of the Ministry of Health with little interaction with the education departments at all levels.

*In this curriculum we would like to emphasise that the various components of the school health programme must be an integral part of 'Health and Physical Education'. Infact health and nutrition programmes should form the basis for health and nutrition education rather than just focusing on 'creating awareness' in children about what they should eat, especially when a large percentage of children do not have access to adequate food.*

### **2.3 Tackling Malnutrition among School going Children: The Importance of the Mid Day Meal Programme**

The school health programme had emphasised the need for an integrated approach where school lunch was an important component to tackle malnutrition

and also provide the basis for nutrition education. Except for Tamilnadu that implemented the mid day meal programme, most other states only did so in bits and pieces. In mid 1995, the government of India launched a new centrally sponsored scheme, the National Programme of Nutritional support to Primary Education. Under this programme, cooked mid day meals were to be introduced to all government and government aided primary schools across states. Even after this several states did not implement this programme but following the Supreme Court's judgement of November 28, 2001 directing all state governments to introduce mid-day meals in primary schools within six months is a step towards dealing with hunger in classrooms. (Dreze and Goyal: 2004) The perspective behind making mid day meal compulsory at the primary level is because of the poor nutritional status of children upto six years of age that continues into adolescence as well. Adolescents' nutritional and health status is a direct reflection of the cumulative effects of childhood health and nutrition. It is estimated that 55 percent of adolescents in India are anemic and is among the highest in the world. ([www.icrw.org](http://www.icrw.org))

The high prevalence of anemia has serious consequences for the growth of children during adolescence where several physical changes requiring extra nutritional inputs are occurring. The growth is dependent on adequate nutrition, which is determined by the availability of food of sufficient quantity and quality, the ability to digest, absorb and utilise food. Food availability and its distribution are dependent on access to livelihoods, food practices, cultural traditions, family structure, gender, meal patterns and the political environments. The digestion and absorption of food can be impeded by infections or metabolic disorders. Anemia affects growth and energy levels and for girls



it is of concern because during pregnancy it is associated with premature births, low birth weight and perinatal and maternal mortality. If we examine the data on causes of mortality during the reproductive age group for women, anemia is the single most important cause of death. It is in this context that the school lunch programme becomes an important input for dealing, at least partially, with hunger, which is the cause for under nutrition among children. *The under-nourishment at the pre-school and school going age groups has a negative impact through the life of the child right upto adulthood.* The value of mid day meal programmes lies in the fact that it has a positive impact on educational advancement, child nutrition and social equity (Dreze & Goyal: 2003; World Bank: 2004)

Even following the Supreme Court judgement a recent study by Jean Dreze and Arpita Goyal shows that there are some states where there is full implementation of the programme, others where there is only partial implementation and in the states of Bihar and Uttar Pradesh where there is no coverage at all. In states where it is being implemented, one finds that children are being served a cooked meal for lunch. The evidence suggests that the mid day meals have enhanced school attendance and retention. It is definitely a motivating factor for children to attend schools more regularly. For poor children this programme does help in *at least partially* addressing *classroom hunger* and has helped in averting in the intensification of child under nutrition in drought-affected areas. Apart from addressing under nutrition, the mid-day meal programme also creates opportunities and conditions for greater social interaction across castes.<sup>1</sup>

In some states like Tamilnadu the mid-day meal programme has been integrated with regular medical check ups and necessary follow up at a negligible cost. *The members of this focus group recommend that the mid day meal programme must become a part of the curriculum of this subject along with regular medical check ups and follow up.*

#### 2.4 Status of School Health Programme: A Review

The poor state of the school health programme has been observed by a few evaluation studies across states. A Committee was set up by the government of India in 1960 to assess the standard of health and nutrition of school children and means to improve them (GOI: 1961). This committee found that since 1950:

“Some advance has been made, mostly in urban areas, towards medical inspection of school children and treatment. The progress however has been slow. The overall picture has not changed perceptibly. Although hygiene and health education find a place in the school curriculum in some States, the emphasis is not laid on their practical aspect “ (GOI: 1961; p.11). There were also structural constraints in terms of availability of medical officers, especially in rural areas. Since the school health programme was dependent on the staff in primary health centers, any shortage of staff immediately affected the programme adversely. This would continue to be a constraint in rural areas where the primary health centers and community health centers are weak in terms of infrastructure and human resources across several states.

<sup>1</sup> The constraints imposed by caste dynamics during the process of cooking and feeding in schools has been discussed by Dreze and Goyal. Upper caste resistance to dalit women cooking the mid day meal programme has been documented. However, such initiatives also provide opportunities for addressing these social issues in classroom situations. The status of these programmes for tribal areas and the poorer districts needs to be further explored.



The committee observed that:

"We are of the opinion that the facilities available at present for school health in different states are not satisfactory although the system of school medical inspection has been in vogue for a number of years in many states. The carrying out of medical inspection in a perfunctory manner, the non-availability of remedial facilities, lack of follow up even in the cases of those declared to have defects and the lack of co-operation between the school authorities and parents are some of the factors which have contributed to unsatisfactory results in the school health services. We feel therefore, that unless the present system is considerably improved, it would be a mere waste of time and money to continue it." (GOI: 1961; p.12).

*While the above-mentioned constraints are real, it is overwhelmingly felt that one must not abandon the idea of school health services. The present review of the National Curriculum offers an opportunity to explore possibilities for reviving the school health programme and use it as an opportunity to put pressure on primary health centers and other public health institutions to interface with schools. We recognise that there is great variation in the availability, accessibility and responsiveness of public health services and recommend that wherever there is a lack of public services some alternative strategies like involving local NGOs and practitioners need to be explored.*

## 2.5 Yoga and Physical Education for Fitness and Health of Children

Both yoga and physical education contribute to not merely the physical development of the child but have a positive impact on psychosocial and mental development as well. Playing group games have a positive impact on individual self esteem, promotes better interaction among children, imparts values of co-operation, sharing and to deal with

both victory and defeat. Similarly yoga practice contributes to the overall development of the child and various studies have shown that it contributes to flexibility and muscular fitness and also corrects postural defects among school children (Gharote, 1976; Gharote, Ganguly & Moorthy, 1976; Moorthy, 1982). In addition it plays an important role in improving cardio-vascular efficiency and helps to control and reduce excessive body fat while contributing to the overall physical and health related fitness (Ganguly, 1981; Bera, 1998; Ganguly, 1989; Govidarajulu, Gannadeepam & Bera, 2003; Mishra, Tripathi & Bera, 2003). Apart from contributing to physical fitness, yoga also contributes to improving learning, memory and dealing with stress and anxieties in children. (Kulkarni: 1997; Ganguly, Bera & Gharote, 2002))

Both yoga and physical education have not been given the due importance in the school curriculum and neither has their contribution to the health and overall development of the child been adequately acknowledged. The constraints faced by yoga and physical education is related to a number of factors that affect the quality of school education in general and health and physical education in particular. These constraints include lack of appropriate school environment in terms of physical infrastructure, furniture, lighting, ventilation, water supply etc.; lack of budgetary support; lack of transport services; lack of adequately trained teachers and institutions for their training; lack of proper documentation and systematic evaluation of the area and lack of coordination between the education and health departments (GOI: 1961).

The observations made by this committee largely will hold true even today but what we do not have is adequate research in this area, which we feel is indicative of the importance it receives in the policy and research circles. In the following section we present the findings of a few studies on the status and transaction of the curriculum in this subject.



A survey of 44 middle schools in Delhi on the status of school health programme showed that health education in schools does not get sufficient time or attention and most teachers are not equipped to deal with this subject. This survey showed that only 12.5% of the teachers had received training in health education. Support facilities like books and audio-visual material were minimal in all the surveyed schools. Apart from health education activities, less than 50% of the schools offered games and physical training and less than that was devoted to health teaching. The school health services were available to around 22% of the schools, the remaining did not have any significant input. As a result regular monitoring of children did not take place at all. This survey also looked at the physical surroundings of the school in terms of ventilation, cleanliness, drinking water and latrines. The schools fared poorly on all these inputs and therefore are bound to affect their health in the long run. A morbidity survey among the children in these schools revealed that they are related to poor nutrition and lack of access to safe water and sanitation facilities. (Raju, B.1970)

A study of awareness among teachers of primary and secondary levels in Anna District of Tamilnadu showed a very low level of awareness regarding health promotion measures and was unable to carry out these measures systematically. There was lower awareness among male teachers and those in rural as compared to urban areas (Dhanasekaran: 1990).

An evaluation of the school health programme in relation to teacher's knowledge showed that elementary school teachers have misconceptions about health and health education. According to the study, the teachers possessed inadequate knowledge regarding the subject of health education. Though the health authorities were being involved in the school health programme there was little co-ordination between the education, health and social welfare departments. Health education and management of school health programme were not

included in the pre-service or in-service education of teachers and hence the lack of integration of this subject areas with others (Potdar, R.S: 1989)

Although the number of studies concerned with yoga and physical education are very few, the available studies throw some light on the status of this area.

As far as physical education is concerned the available studies show that this area does not get the importance that it should and this gets translated into a negative attitude on the part of the teachers and head masters of schools. An evaluation of the physical education curriculum at the lower primary stage in Mysore district showed that eighty percent of headmasters, sixty percent of general teachers and 90 percent of physical education teachers had a positive attitude towards physical education. A significant percentage of general teachers had a negative attitude towards physical education. As far as the curriculum and syllabus is concerned, the aims and objectives of this area was not clearly stated and the existing syllabus for this area did not contain minimum levels of learning and the activities prescribed under yogic exercises were found to be inappropriate. The infrastructure for physical education was found appropriate but fifty percent of the lower primary schools of Mysore city did not have physical education teachers (Sudarshan and Balakrishnaiah: 2003).

The secondary status given to physical education is corroborated by a study on attitude of secondary school students towards physical education. This study showed that in government and private schools; across rural and urban areas and across gender there was a positive attitude towards physical education. This study also showed that students in government schools had better attitude towards physical education as compared to the private schools. Students in urban areas had a better attitude to physical education than those in rural areas. The study observed gender difference in the



attitude towards physical education with boys having a more positive attitude than girls (Mishra,SK.,1996)

The experience of introducing yoga in school curriculum has been quite a mixed experience. There is a tendency for yoga to be reduced to mere physical exercise that defeats the very essence of this practice. At present there is a shortage of trained yoga teachers that is related to the non-availability of adequate number of institutions that have the capacity and expertise for this purpose. If yoga is to be effectively integrated then the government would need to overcome the shortage of yoga teachers beginning with the senior secondary level and then consider classes from sixth to tenth. In the interim period teachers who are trained in physical education are also getting some training in yoga education. *It may be worthwhile to review the syllabus and pedagogy of the teacher's training programme offered by different colleges and deemed universities in this area.*<sup>2</sup>

Apart from the concern about availability of trained teachers, there is also the negative attitude of administrators at the central, state and district levels within the education department and authorities within schools with respect to both yoga and physical education. The experience of both these areas has been that where there is a supportive school atmosphere the transaction of both these subjects has by and large been effective but examples of these are rather few in number.

## 2.6 The Place of Health Education in the Curriculum

Conventional thinking places undue emphasis on the role of health education that stresses on behavioural

change as a means to improving the health status of people. Health education is not merely giving information about diseases, their transmission and prevention but needs to relate it to the kind of health problems that children and their communities face. The causes of these diseases are not merely biological but have a strong social and environmental dimension as well. *Given the multi-causal understanding of health, many of the health education concepts are being dealt by various subjects in the school curriculum that includes environmental studies, language, social sciences, science, and physical education, yoga and population education. This then calls for greater interaction and coordination between the subject teachers that cover topics concerned with health and physical education.* It also needs to be graded according to the developmental needs and intellectual ability at different levels of schooling. For example, at the primary level the focus could be much more on individual and environmental hygiene and provisioning of midday meal and health check ups. Keeping in view the inputs in science, social studies and environmental studies, the curriculum of health and physical education can also start introducing concepts of health, disease and environmental determinants of health not only as a repetition of theory but through experiential learning it can reinforce concepts that they have learned in other subjects and apply it to their life experiences. *This kind of an approach can only work if there is adequate teacher preparedness, which needs to be addressed through the pre-service and in-service training programmes for teachers at all, levels.*

There are very few studies that have looked at the transaction of curriculum, constraints faced by teachers

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<sup>2</sup> These observations have evolved out of discussions with the faculty at Kaivadyadharma, Lonavala, Maharashtra. These institutions have been involved with training teachers for yoga and have introduced it in the school curriculum in Navodaya and Kendriya Vidyalaya, State government and private schools.



in transaction and pedagogical approaches to curriculum for this subject area. The available studies are limited to commenting on issues of human resources and infrastructural inputs and this is primarily related to the area of only physical education. (Sudarshan and Balakrishnaiah: 2003)

*What is important and significant to note is that while this subject area was given the status of a compulsory subject, in real terms it is treated as an area that is less important than the core subjects. As a result neither physical education nor health has been treated as an important subject nor have innovative methods been incorporated for transacting the curriculum.*

The experience of health education has been disappointing because there is a lot of information being given regarding the 'dos and don'ts' in matters related to food intake, water and sanitation. The messages are universal and do not factor in the varied socio-economic and cultural contexts in which children live. For example, there is a substantial portion of syllabus in health education at the middle and higher levels to anatomy, physiology and environmental hygiene which lays excessive responsibility on individuals rather than the social aspects that determine health. This kind of an approach assumes that children are not aware and need to be educated about how to promote health and therefore very little of real life experiences are incorporated into this area which would make the process a more joyful and meaningful experience for children.

## **2.7 Skills for Addressing Psycho-social**

### **Developmental Needs in the Curriculum for Health and Physical Education**

Addressing basic needs in terms of food is seen as an integral part of the school curriculum. However, apart

from this there is a need to enhance skills for psycho-social competence at different stages of the child's development. These concerns are related to sexual development and sexuality during adolescence, stress and mental health related issues, learning difficulties and other such special needs.

Adolescence is a critical period for development of self identity. The process of acquiring a sense of self is linked to the physiological changes and also learning to negotiate the social and psychological demands of being young adults. Responsible handling of issues like independence, intimacy, and peer group dependence are concerns that need to be recognised and appropriate support be given to cope with them. The physical space of the outside world, one's access to it and free movement influence construction of the self. This is of special significance in the case of girls who are often constrained by social conventions to stay indoors. These very conventions promote the opposite stereotype for boys, which associate them with outdoor and physical process. These stereotypes get especially heightened as a result of biological maturational changes during adolescence. These physiological changes have ramifications in the psychological and social aspects of an adolescent's life. There is a growing realisation that the health needs of adolescents, particularly their reproductive and sexual health needs require to be addressed. Since these needs predominantly relate to sex and sexuality that is culturally a very sensitive area, they are deprived of opportunities to get the appropriate information. As such their understanding of reproductive and sexual health and their behaviour in this regard are guided predominantly by myths and misconceptions, making them vulnerable to risky situations, such as drug/substance abuse and HIV/AIDS transmission. Age-appropriate context-specific interventions focused on adolescent



reproductive and sexual health concerns including HIV/AIDS and drug/substance abuse, therefore, are needed to provide children opportunities to construct knowledge and acquire life skills, so that they can cope with these concerns that are related to their process of growing up.

In recent times a great deal of importance has been given to adolescent health in school curricula and been dealt with as a co-curricular area. The thrust for this area has come from the Reproductive and Child Health and the HIV/ AIDS programmes and a number of modules have been tried and tested for creating awareness among adolescents by NGOs. *The group strongly recommends that the curricular area must guide the scope and determine the appropriateness of the design, materials and pedagogy that are prescribed by health programmes as interventions in the school curriculum. This is critical because several of these programmes are tied to external funding and decisions are made at the central and state levels.*

Apart from adolescent health *a comprehensive mental health programme should be part of the school health programme that includes health instruction at all grade levels, easily accessible health services, a healthful, nurturing and safe environment, and*

*interaction with families and community organisations. The aim of school-based interventions is to provide an experience that will strengthen the children's coping abilities to counter environmental stress and disadvantages with which they have had to cope in growing up.*<sup>3</sup> There are a few initiatives that have introduced programmes for stress management in children and early identification of emotional and mental difficulties in schools but these are not part of the curriculum of 'Health and Physical Education'. An example of this is the VIMHANS project in urban and rural schools in Delhi.<sup>4</sup>

There is a growing recognition of the examination related stress and its effect on children. These concerns are complex and need to be addressed in different forums and levels. While it is important to identify and provide skills and support for children to deal with stress, it is necessary to recognize that stress cannot be dealt by only dealing with children, parents and teachers. What is required is the reform of the examination system, which is an administrative and political decision.

There are additional inputs being made under the National Population Education Programme, one of the major thrust being Adolescent Reproductive and Sexual Health. These concerns have been encapsulated in an emerging curriculum. Although efforts are on to ensure

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3 School-based mental health interventions may be environment-centred or child-centred and one may lead to the other. The school environment refers to the "living and learning" climate of the school. Environment-centred approaches aim at improving the educational climate and providing opportunities for the child to connect with a healthy school programme where they will find healthy role models. This positive mental health atmosphere includes the structure of the school day, the structuring of playground activities, the physical structure of the school and the classroom decoration. Environment-centred programmes also strive to enhance the ability of administrators, teachers and support staff to deal with the specific areas of emotional or behavioural disturbance they encounter and, when necessary, to understand how to make use of other agencies servicing children. Both these approaches are complimentary and define the scope of mental health inputs into the school curriculum.

4 The Child Development and Adolescent Health Centre of VIMHANS, New Delhi has initiated a project for a comprehensive school mental health programme in urban and rural government schools in and around Delhi. Government of India, Director General of Health Services and WHO sponsor this project and is implemented in schools. It is a comprehensive project because it addresses the needs of children, adolescents and their caregivers (Vimhans: 2004). This is an important aspect of school health and this is an innovative programme that needs to be studied and documented in some detail. This center has also been running programmes to deal with exam-induced stress among school children, which also needs to be reviewed. It is important to explore similar initiatives in other states where other institutions may have also addressed these concerns.



integration of these concerns in the content and process a school education and teacher education, the inputs are primarily being made separately from subject curricula as also the area of health and physical education. *The issue that needs to be addressed here is how these areas have to be integrated into the school curriculum effectively while keeping in mind that several departments like health and family welfare, Sports and youth affairs, women and child welfare, home and education have initiated programmes that are part of the subject. There is a need for some form of co-ordination across these departments and the needs of the school curriculum must define the scope of the programmes initiated by these various departments.*

There are subjects that deal with aspects of these initiatives in a theoretical manner and merely including these under Health and physical education will only result in repetition. For example there are certain objectives in population education that would be a part of the Science, Social Science and Habitat and Learning.<sup>5</sup>

Across all these areas it would be inadequate if only theoretical inputs or awareness is generated. Infact many of these concerns require the imparting of skills to children, parents and teachers to deal with the issues arising out of their daily lives in the family, school and community. There are some NGOs that have tried some innovative approaches to address some of these issues. A few of these initiatives are discussed under 'Alternative Curriculum'.

### 3. CURRICULUM DESIGN

Based on the conceptual framework the National Focus Group committee has worked towards evolving the overall and specific objectives for this subject area. The subject shall *continue to be a compulsory subject from primary*

*to secondary stages, and as an optional subject at the higher secondary stage. However, it needs to be given equal status with other subjects, a status that it is not being given presently. In order to transact the curriculum effectively it is essential to ensure that the minimum essential physical space and material equipments are available in every school, and that the doctors and medical personnel visit the school regularly. Teacher preparation for this area needs well-planned and concerted efforts. This subject area, consisting of health education, physical education and yoga must be suitably integrated with the elementary and secondary pre-service teacher education courses. The potential of existing physical education and yoga training institutes may be adequately reviewed and utilised. Similarly there needs to be a review and formulation of appropriate syllabi and teacher training for the transaction of yoga in schools. It is also essential to ensure that these concerns are integrated in the activities of National Service Scheme(N.S.S.), Scouts and Guides and National Cadet Corps (N.C.C.)*

*The members of the focus group were unanimous in their opinion that this area must be a compulsory subject upto the tenth class and be treated on par with the core subjects so that students wishing to opt for it can do so in lieu of one of the five subjects for the board exams at the end of Class X.*

The principles guiding this subject area are premised on the understanding that an individual, family and the community influence individual health through systematic and coordinated efforts of a number of inputs. Health Education of children is therefore a combined responsibility of home, community and the school. Health Education in the school should form a part of the routine life of the school contributing to

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<sup>5</sup> The Communication on "Adolescence Education" to National Steering Committee and National Focus Groups for effective integration of the area in the content and process of school education has been well thought and worked out. This could be the prototype for integration of this area.



the development of a right attitude among children towards health and inculcation of good health habits in them. The programme should include activities suggested under school health practice as regular part of school activities and life. The objectives and syllabi should reflect the four major themes that we had identified in the beginning of this paper. They include:

1. Personal health, physical and psycho-social development
2. Movement concepts and motor skills
3. Relationships with significant others
4. Healthy communities and environments

In order to address these four major areas the committee has formulated the overall and specific objectives to guide curriculum and syllabi planning.

### 3.1 Overall Objective

To provide the required theoretical and practical inputs in order to provide an integrated and holistic understanding of health, disease and physical fitness among children at the primary, secondary and senior secondary levels.

### 3.2 Specific Objectives

1. To help children learn and become aware of health – the different ways in which it is defined, to develop a positive attitude towards health, as individuals and be collectively responsible to achieve it.
2. To provide the requisite services through the school health and nutritional programmes for improving the health status of children
3. To help children become aware of appropriate health needs at particular age(s) through information and communication. To encourage them to learn desired skills and

form right habits about food, exercise, sleep, rest and relaxation in their everyday life.

4. To help children know and accept individual and collective responsibility for healthy living at home, school and in the community.
5. To help children to be acquainted with nutritional requirements, personal and environmental hygiene, sanitation, pollution, common diseases as well as measures for their prevention and control.
6. To help children know their status of health, identify health problems and be informed for taking appropriate remedial measures.
7. To create awareness among children about rules of safety in appropriate hazardous situations to avoid accidents and injuries. To acquaint them with first-aid measures about common sickness and injuries.
8. To help children learn correct postural habits in standing, walking, running, sitting and other basic movements so as to avoid postural defects and physical deformities.
9. To help children improve their neuromuscular coordination through participation in a variety of physical activities contributing to their overall fitness so that they live well and work better.
10. To help children understand the process of growing up during adolescence, HIV/AIDS and Drug abuse.
11. To provide skills for dealing with psycho-social issues in the school, home and the community
12. To help children grow as responsible citizens by inculcating in them certain social and moral values<sup>6</sup> through games, sports, N.C.C., Red Cross, Scouts & Guides, etc.
13. To create interest among children for the practice

<sup>6</sup> These include discipline, sense of responsibility, mutual respect and cooperation, belongingness and team spirit, individual sacrifice in the larger interest of the group, courage and self esteem



of yogasanas and meditation through which they learn the skills / art of self-control, concentration, peace and relaxation to avoid the ill effects of stress, strain and fatigue of routine everyday life.

14. To address the physical, psycho-social needs of differently abled children.

### 3.3 Pre-requisites for Curriculum Transaction

There are infrastructural, human resource and teacher preparation inputs that are required for curriculum transaction of the subject "Health and Physical Education". Mid day meals within the subject curriculum would mean that adequate physical infrastructure and human resources for cooking and distribution of meals to children.<sup>7</sup> Health and hygiene education must be an applied area and theory that is taught in other subjects must be reinforced through experiential learning. An example of this is the project on famine carried out by the Adharshila School, Sendhwa district, Badawani, Madhya Pradesh wherein children prepared a "Book on Famine" (Akaal ki kitaab named "Rookhi ki Sookhi") in their area by interviewing villagers and recording the local history of famine.<sup>8</sup>

Similarly the textbook on science in the Hoshangabad experiment deals with malaria as a topic and through a survey based approach helps children learn the link between environment and health.

***For health, yoga and physical education there needs to be minimum of outdoor and indoor facilities coupled with proper ventilation and sanitation in the classroom and school premises at the primary, secondary and senior secondary levels.***

In view of the paucity of resources to buy equipment and also build specialized facilities like swimming pools or football fields it is proposed that there needs to be pooling and sharing of facilities within a specified geographical area. The facilities managed by government, private and other agencies needs to be shared in order to avoid unnecessary expenditure. Examples of such sharing are available for review and consideration. Open spaces and community centers in rural and urban areas should be adequately maintained and can be used for health and physical education programmes.

***The human resource dimension is critical for both yoga and physical education. It is mandatory for all educational institutions to appoint trained and qualified teachers in health, yoga and physical education.***

The number of teachers should be proportionate to the number of students and these teachers should be fully at par with other regular subject teachers. Efforts must be made to involve and utilise the services of other teachers who have interest, aptitude and expertise in this subject. In addition parents, alumni, local sports veterans, recognised specialised NGOs having the required expertise and trained medical practitioners to strengthen the human resources. ***Teacher preparation at different levels is mandatory and refresher courses must be made available for in service teachers at least once in five years for their professional growth with appropriate incentives.*** Resource material should be made available to the pre-service and in-service teachers to enhance their knowledge of the subject. If any

<sup>7</sup> The lack of utensils, regular supply of provisions, fuel and human resources to cook and distribute food to children has been well documented. As a result there is a criticism of the mid day meal programme as disrupting teaching and learning in schools. In order for this programme to be effective as a means for addressing at least partially hunger in classrooms the infrastructural and human resource issues have to be addressed.

<sup>8</sup> This has been cited and described as an example of Community Work and social engagement as curricular components in the position paper on Work and Education.



employed teacher has achievements in any game and sport or train students who become state and national athletes they should be duly recognised and offered incentives or rewards.

There are some additional requirements for implementing the curriculum for yoga education and these include the following:

- Yoga should be introduced in schools from the fifth class onwards but in the earlier classes awareness of body, the relationship between food and health; maintaining correct posture etc. are to be emphasized.
- Enhancing teacher training institutions and increasing the capacity for training yoga teachers
- A separate stream needs to be identified for yoga teachers and yoga therapists
- Standardisation of yoga education at school is essential
- There is a need to motivate the principals and staff in schools regarding the importance of yoga education

Here it is important to point out the subject of health, yoga and physical education must be joyful and therefore much more participative in nature. Play as an important medium of learning must be emphasised and only age appropriate knowledge and skills must be imparted. The yoga curriculum must begin only from the fifth class and until that stage children should be encouraged to play and the school timetable needs to accommodate this for a minimum of half an hour a day.

### 3.4 Alternative Curriculum Designs: A Review

There are examples of alternative curriculum designs that have addressed aspects of health, yoga and physical education. These alternative curricula have been developed by organisations that work on issues largely related to education and adolescent health. The curriculum, its transaction and pedagogical techniques used for health and physical education related issues of the Mahila Sikshana Kendras of the Mahila Samakhya programme need to be studied and relevant aspects should be integrated into this subject.<sup>9</sup>

Experiences of the Siksha Karmi programme whereby the siksha karmis who are primary school teachers were used to provide information to rural youth about health, reproductive health and other life skills that covered a range of social and personal issues.<sup>10</sup>

The experiences of Sandhan, a Rajasthan based NGO, has been working with children's education and have experimented with innovative curriculum and pedagogy. Their work with adolescent children to skills for holistic education also needs to be studied and adapted into the national curriculum where it is appropriate.

The proposed scheme of content on Adolescence Education to be integrated in the school curriculum developed under the National Population Education Project – may also be considered during curriculum renewal. The co-curricular approach for life-skill development tried out under the project needs to be made an integral part of the content process of school education and teacher education.<sup>11</sup>

<sup>9</sup> There is an exercise coordinated by Sandhan to put together the curriculum of the Mahila Sikshana Kendras from different Mahila Samakhya programmes. This curriculum must be adapted for health and physical education wherever it is appropriate.

<sup>10</sup> The issues included were a) self awareness, b) social awareness such as social norms, gender discrimination and values; c) problem solving, d) working with others e) communication skills f) motivational skill; how to resist and deal with peer pressure. Health topics covered physical and emotional health and services available, reproductive and sexual health.

<sup>11</sup> The life skills identified for students are: (a) critical thinking (b) interpersonal communications skills and (c) negotiation skills. And for teachers are: (a) communication skills (b) skills for being non-judgemental and (c) skills for having empathy.



These are just few examples of NGOs and quasi NGOs who are working in areas related to health. There is a need to undertake systematic research on school health initiatives like RAHA in Jharkhand and document their experiences and the outcomes for education. *The focus group strongly recommends that systematic studies and the documentation of alternative experiences in the area of health and physical education are needed for strengthening this area. It also emphasises the need for initiating some pilot projects across selected states for transaction of this subject area within the perspective suggested in this paper.*

A preliminary review of the syllabi of this area suggests that there is a great deal of repetition of subject matter and little of applied learning. There is a concern that if this area repeats what is being taught in the other subject, then it could become very boring for children. Therefore this area could reinforce some of the subject areas and build it into the co-curricular areas like the SUPW, Guides etc. Based on their long experience in this area the committee members

observed that most of the schools do not have teachers of physical education, and wherever they are, they are assigned multiple responsibilities. The process of teacher preparation in this area is found wanting in many respects.

*The experts on physical education felt that the component of health and physical education is overshadowed by sports activities. Therefore there was a general consensus that there needs to be a distinction between activities for physical fitness, games and sports at all levels in the syllabus.* An important issue that was raised was one of evaluation, which has contributed for the low priority of this area and needs serious consideration. There was a strong feeling that the achievement of students in this subject must be rated like other subjects particularly at the secondary stage, in order for it to receive the needed priority.

An important reason for the ineffective transaction of this area in schools is primarily due to non-availability of trained teachers, infrastructural facilities and required funds.

1. Class IX (for the session 2001-2002) and Class X (for the HSC Exam 2002) Board of Secondary Education Orissa.
  - The last four pages (Page no. 175 to 182) contain the curriculum on Health and Physical Education for Classes IX & X.
  - The curriculum lays more emphasis on games, physical fitness and less on Health and Health Education aspects.
  - Though a pattern of evaluation and distribution of marks have been mentioned it is not clear if the evaluation would be compulsory.
  - According to the curriculum "Both theory and practical examinations are to be conducted internally at the school level for class IX and Class X and proper records be maintained for verification.

The examination in Class IX will be conducted with full marks 50 in two terms with 25 marks in each term. The final assessment and grading can be made taking the average marks of the two terms. The examination in Class X will be conducted with full marks 50 in two terms with 25 marks in each term. The final assessment and grading can be made taking the average marks of the two terms. A to E indicate the order of achievement from the higher to the lowest level.

- Regarding allocation of teaching period a total of only 3 periods have been allotted, of which one period is optional, which clearly proves the lack of emphasis for this discipline.

2. The secondary school curriculum 2006.

Central Board of Secondary Education only lays down some sketchy content areas. Does not mention whether or not there should be an examination. Nothing has been mentioned regarding the theory and practical content, the hours allotted for each area, the evaluation system, and marks to be allotted to each area. Therefore, it could be concluded that the subject has not been considered seriously.

3. The I.C.S.E, March 2007 – Regulations and Syllabuses

The courses of studies mention the following:

For Class IX – There will be one written paper of two hours duration carrying 100 marks and Internal Assessment of 100 marks.

For Class X – There will be one written paper of two hours duration carrying 100 marks and Internal Assessment of 100 marks.

The written paper will be divided into two sections, A and B.

Section A will consist of compulsory short answer questions on Health, Hygiene and First Aid.

Section B Candidates will be required to answer questions on the rules, skills required and the methods of training of any two of the given team games.

The contents and the examination pattern has been identified and seems to be better than the above 2 courses of studies though more emphasis has been given to physical aspect than health aspect. However the following areas have been indicated:

- Method of assessment indicator and internal assessment stressed
- But it does not mention whether or not the curriculum would be compulsory and in case of non-performance what should be status of the candidate regarding pass or fail.



Finally it could be mentioned that:

- The subject of Health and Physical Education has never received its due even after independence.
- An overall revamping is necessary starting from the ministry to the classroom situation, if the health of the future of the country is to be improved.

*Reference: Prof. P. C. Rout, 'Curriculum for Elementary Education' Retd. Director, Elementary Education, Orissa .*

### 3.5 Review of Syllabus Related to Health and Physical Education

In order to highlight some of the concerns regarding the available syllabus, an exercise was undertaken for the state of Orissa and is presented in the box below.

There is a well worked out syllabus for physical education as well and this undergoes periodic review by experts in this area. **The members of the focus group were of the opinion that the existing syllabus and whatever review is undertaken must be included in the process for evolving syllabus design in the future.**

There is considerable overlap with respect to the theoretical portion of this subject. It maybe useful to reinforce anatomy, physiology of the body from the science subjects but also expose children to different ways of viewing and understanding the body in a more holistic manner as compared to a Cartesian view of the body. The science curriculum needs to address health related concerns and also elaborate their relationship to health.

Experiences of women's' groups, who have tried approaches to understanding the body and its functions, maybe be instructive for developing the syllabus and

pedagogy in this area. The different approaches to understanding the body, causation and treatment of diseases could also form a part of the syllabus. Yoga could certainly enrich this aspect of the curriculum with its rendering of the body and also the understanding of disease causation and treatment. Understanding of the use of local herbs and plants, their medicinal value and how people continue to use them while also trying allopathic medicine is an important part of the curriculum. This is an important way of giving space to local knowledge, beliefs and practices which children experience in their daily lives.

### 3.6 Evaluation

The evaluation for this area has been divided into theory and practicals with 70 percent for the former and 30 percent for the latter. The Committee reviewed this and was of the opinion that this needs to be changed. What needs to be identified is the minimum information that a child must learn in this area and whether the testing be just based on a written examination or could there be other ways in which the child's knowledge be evaluated. How will co-curricular learning be evaluated? **While the skill based**

*component of physical education and yoga could be tested, the health aspect needs continuous and qualitative assessments.*

### 3.7 Prospects for Vocational Training

This area opens up possibilities for a number of vocational programmes in Health, physical education and yoga. In health related areas there are a number of para professional programmes like health visitors, occupational therapy, physiotherapy, speech therapy, lab technicians, special education and counseling skills, rehabilitation services. For yoga and physical education there are avenues for professional career in sports and yoga, as teachers for physical and yoga education etc.

## 4. RECOMMENDATIONS

**The Members of the focus group strongly recommend that:**

- This area must be a compulsory subject up to the tenth class and be treated on par with the core subjects so that students wishing to opt for it can do so in lieu of one of the five subjects for the board exams at the end of Class X. At the plus two level it maybe offered as an elective subject. The nomenclature for the subject shall be "Health and Physical Education" across the different levels of schooling.
- The comprehensive definition of school health by the Bhore Committee in 1946 be adopted as a working definition for this subject area. Within this definition a holistic understanding of health is the guiding principle and yoga and physical education are seen as contributing to the overall development and health of the child.
- The major components that have to be included in the school health programme

include medical care, hygienic school environment, and school lunch, health and physical education. The School Health Programme has to be a coordinated effort between the education and health departments with the latter providing preventive, curative and promotive services at all levels of schooling.

- The components of the school health programme must be an integral part of 'Health and Physical Education'. Infact health and nutrition programmes should form the basis for health and nutrition education rather than just focusing on 'creating awareness' in children about what they should eat, especially when a large percentage of children do not have access to adequate food. Therefore the mid day meal programme must become a part of the curriculum of this subject along with regular medical check ups and follow up.
- The education department must coordinate efforts with the health department and where the public health services are weak alternative strategies like involving local NGOs and practitioners must explored.
- For health, yoga and physical education there needs to be minimum of outdoor and indoor facilities coupled with proper ventilation and sanitation in the classroom and school premises at the primary, secondary and senior secondary levels
- Given the interdisciplinary nature of the area there is a need for cross curricular planning and need to be integrated with science. Social science, language and other relevant subjects from the primary to senior secondary levels addressing both the theoretical and applied dimensions.



- Science subjects must integrate the health dimensions for topics that are related to health issues.
- There is a need to review the curriculum, syllabus and pedagogy of the teacher's training programme for health, physical education and yoga offered by different colleges, institutions and deemed universities in this area within the conceptual framework offered by the focus group.
- All teacher education courses must include health, yoga and physical education as a compulsory subject.
- Descriptive and impact studies be commissioned to review the status of this subject in school education and document alternative experiences in this area.
- There is a need to try the approach suggested for this area on a pilot basis across different types of schools and only then up scaled.
- For effective implementation of this subject advocacy is required at different levels of the education and health systems.
- The group strongly recommends that the curricular area must guide the scope and determine the appropriateness of the design, materials and pedagogy that are prescribed by health programmes as interventions in the school curriculum. This is critical because several of these programmes are tied to external funding and decisions are made at the central and state levels.

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ISBN: 81-7450-567-9